Greenland Flow Distortion EXperiment. (GFDex)
BADC Data description

SAP data

Sensitive area predictions produced operationally by the Met Office for the GFDex field campaign. An ensemble transform Kalman filter was applied to output from the 23-member Met Office MOGREPS ensemble on a 2.5degree grid covering the NAE domain. This determined the locations of sensitive areas for verification regions of north-west Europe including the UK (NWEU) and Scandinavia (SCAN). These calculations were performed for lead times of 60, 48, 36 and 24 hours, and optimisation times of 24, 36 and 48 hours. There are two types of plot, signal variance and sensitivity by area, both with a background field of the forecast of mean sea-level pressure at targeting time. The folder names are the forecast initialisation time in the format yyyymmddhh, and the file names for the area plots are ETKF_<lead time>_<optimisation time>_SP.ps, and ETKF_<lead time>_<optimisation time>.ps for the signal variance plots. The files are available in ps and png formats.

DC data

Plots of data coverage, showing the number and location of the dropsondes from the GFDex field campaign which were assimilated into the forecast. The plots are for the 00Z, 06Z, 12Z and 18Z forecast runs of the Met Office global model. There are four types of plots. QG plots show you which observations were received in time to be assimilated into the main forecast cycle, from which the operational forecast products are generated. The QU plots include observations which were not available in time to be included in the main forecast run, but were used in the update cycle, to generate background for the next forecast. The PG and PU plots relate to a parallel forecast cycle that was running at the time of the campaign and can be ignored. The format of the file names is qghh.ps where hh is the forecast initialisation time. The files are available in ps and png formats.

Summary of UKMO FC (Forecast) Products for GFDex

GLOBAL
- From UKMO Global model run
- From T+0 to T+144 (6 days) every 12 hours
- Available 05-0530 and 1700-1730

Filename	Fields	Comment
yyyymmddhh_GFD_GM_1.gif	MSLP (black) + Z500 (red)	Intervals 4 mb + 60 m
2	Wind barbs at 10 m	Full barb = 10 kts
3	Low (red) + Medium (orange) cloud fraction	Intervals = 0.4, 0.8 and >0.8 shaded
4	Wind barbs at 925 mb	Full barb = 10 kts
5	MSLP + 925-mb temperature (red)	Intervals 8 mb + 1^{o}C

ZOOM
- From UKMO NAE (North Atlantic – Europe) limited area run
- From T+0 to T+48 (2 days) every 3 hours
- Available 0300-0330 and 1500-1530

Filename	Fields	Comment
yyyymmddhh_GFD_NAE_1.gif	MSLP (black) + Z500 (red)	Intervals 2 mb + 60 m
2	Wind barbs at 10 m	Full barb = 10 kts
3	Low (red) + Medium (orange) cloud fraction	Intervals = 0.4, 0.8 and >0.8 shaded
4	Wind barbs at 925 mb	Full barb = 10 kts
5	MSLP + screen? temperature (red)	Intervals 4 mb + 1^{o}C
*_GFD_NAE_ZOOM.gif	Wind barbs at 10 m (hi-resolution)	Full barb = 10 kts

ECMWF
- From ECMWF global model run, replotted by UKMO on North Atlantic and regional type domains
- From T+0 to T+ 5days
- Plots are MSLP = mean sea level pressure; CC = cloud cover; W10 = 10m wind vectors; Z500 = Geopotential height at 500 hPa.

Summary of HIRLAM FC Products for GFDex

Regional domain
- Initialised every 6 hours running T+0 to T+48, with output every 6 hours
- Available about 3 hours after initialisation time.

Folder	Fields	Comment
cloud_mslp	MSLP (2 mb interval) Cloud cover: low (blue), med (red), high (green)	
cross_sec	Cross sections of relative humidity, 3-h precipitation, wind barbs, temperature	4 cross-sections available
geopot	Geopotential height at 300, 500, 700, 850, 925 mb	
hflux	Surface sensible & latent heat fluxes	
prec_temp_wind	Precipitation, 10-m wind barbs, 2-m temperature	
temp_wind	Temperature + wind barbs at 300, 500, 700, 850, 925 mb	
wind	Wind speed + wind vectors at 925 mb	